

99-0655
(SWR-0004)

AMENDMENTS

IN THE CLAIMS

Claim 1 (currently amended): A method ~~for~~ producing a coating for the ~~absorption of neutrons created in a nuclear reaction of radioactive materials, the method~~ comprising:

~~providing where at least part of a shielding element composed of a basic material forming a shielding element;~~

~~providing a dispersion bath whereby a dispersion of the is provided on a surface predetermined for it with a boron-nickel coating in a dispersion bath comprises nickel and at least one of boron and compounds of boron;~~

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~~contacting a surface to be coated of the shielding element with the dispersion in the dispersion bath thereby providing a coating wherein at least one of boron and compounds of boron are embedded in a nickel matrix on the contacted surface of the shielding element, wherein contacting is achieved by providing containing boron, and during the coating process, at least from time to time, a relative ¹¹²⁽²⁾ movement is produced between the surface to be coated of the shielding element and the dispersion bath; and~~
~~separating the shielding element from the dispersion bath.~~

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Claim 2 (previously amended): The method of Claim 1, wherein the relative movement is produced by moving the element to be coated.

Claim 3 (previously amended): The method as set forth in Claim 1, wherein the surface to be coated is arranged face up in the dispersion bath.

Claim 4 (previously amended): The method as set forth in Claim 1, wherein a dispersion bath with boron carbide is used.

99-0655
(SWR-0004)

Claim 5 (previously amended): The method as set forth in Claim 1, wherein a dispersion bath with boron in element form is used.

Claim 6 (previously amended): The method as set forth in Claim 1, wherein the coating is formed chemically.

Claim 7 (previously amended): The method as set forth in Claim 1, wherein the coating is formed electrolytically.

Claim 8 (previously amended): The method as set forth in Claim 1, wherein a coating 350 to 500 μm thick is produced.

Claim 9 (previously amended): The method as set forth in Claim 1, wherein boron or boron carbide with more than 20% by volume is embedded in the nickel matrix.

Claim 10 (previously amended): The method as set forth in Claim 1, wherein boron or boron carbide with more than 40% by volume is embedded in the nickel matrix.

Claim 11 (previously amended): The method as set forth in Claim 1, wherein the dispersion bath is mixed, at least from time to time, during the coating process.

Claim 12 (previously amended): The method as set forth in Claim 1, wherein the method is carried out in a glass tub.

99-0655
(SWR-0004)

Claim 13 (currently amended): A shielding element ~~having produced by producing a~~
coating for the absorption of neutrons created in a nuclear reaction of radioactive
materials, ~~the coating manufactured by a method comprising:~~

~~providing a where at least part of a shielding element composed of a basic material~~
~~forming a shielding element;~~

~~providing is provided on a surface predetermined for it with a boron-nickel coating in~~
a dispersion bath ~~whereby a dispersion of the dispersion bath comprises nickel and at least~~
~~one of containing boron and compounds of boron;~~

~~contacting a surface to be coated of the shielding element with the dispersion in the~~
dispersion bath ~~thereby providing a coating wherein at least one of boron and compounds of~~
~~boron are embedded in a nickel matrix on the contacted surface of the shielding element,~~
~~wherein contacting is achieved by providing, and during the coating process, at least from~~
~~time to time, a relative movement is produced between the surface to be coated of the~~
~~shielding element and the dispersion bath; and~~

~~separating the shielding element from the dispersion bath, wherein the shielding~~
element is composed of an inorganic basic material with a boron/nickel coating on top, where
the coating contains more than 20% boron or boron carbide by volume.

Claim 14 (new): The shielding element of Claim 13, wherein the basic material
comprises an inorganic material and the coating comprises more than 20% by volume of at
least one of boron and compounds of boron embedded in a nickel matrix.